

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:)	
)	
Craig D. YARDLEY et al.)	Group Art Unit: 3721
)	
Application No.: 10/689,379)	Examiner: Christopher R. HARMON
)	
Filed: October 20,2003)	
)	
For: SINGLE-PLY DISPENSER NAPKIN)	Confirmation No.: 3363

MAIL STOP APPEAL BRIEF — PATENTS

VIA EFS-Web

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REPLY BRIEF UNDER 37 C.F.R. § 41.41

Further to the Appeal Brief filed December 17, 2007 ("Appeal Brief"), and the Examiner's Answer dated January 25, 2008 ("Examiner's Answer"), Appellant submits this Reply Brief under 37 C.F.R. § 41.41 to maintain this appeal and in support of the patentability of the pending claims in this application. Appellant notes that a Request for Oral Hearing Under 37 C.F.R. § 41.47 is submitted concurrently with this Reply Brief.

I. **Status of Claims**

Claims 80-90 remain pending in this application. No claims have been withdrawn from consideration. Claims 80-90 have been finally rejected and are appealed.

II. Grounds of Rejection to Be Reviewed on Appeal

Appellant maintains the five issues or grounds of rejection to be reviewed on appeal, as well as the grouping of claims, provided in Section VI of the Appeal Brief.

III. Responses to and Comments on the Examiner's Answer

The Examiner's Answer does not present any new grounds of rejection, but maintains rejections due in part to the Office's misunderstanding of basic claim terms that are well-known in the paper-making field and amply described in the specification.

First, the recitations of "at least about" in the context of the pending claims are proper and definite. The Office's repeats its citation to only *Amgen v. Chugai* in support of the rejection, without any comment on Appellant's distinguishing of that case. Other case law, presented during normal examination and on appeal, has been cited and explained by Appellant, without any comment from the Office. Those cases, as well as the general use of the term "at least about" in the claims and in the specification, reveal that the skilled artisan would readily understand the scope of the claims.

Second, the Office relies heavily on the premise that, because one embodiment described in the specification exhibits the same tensile strength in both the machine direction and the cross-machine direction, the two dimensions are irrelevant and need not be considered for patentability. That is not true. The fact that a paper web according to the present invention may, in one embodiment, exhibit a tensile strength that is equal in each of those two directions does not mean that a paper web cannot have those directions and does not relieve the Office of the duty to consider those recitations to those directions for purposes of patentability. The terms "machine direction" and "cross-machine direction" are clearly defined, are not ambiguous or indefinite, and must be considered in light of the cited prior art. Indeed, proper consideration of the terms, as well as Appellant's further arguments, clearly shows that

the claimed subject matter would not have been anticipated or obvious to the skilled artisan at the time this application was filed.

Appellant maintains its appeal of the rejections and respectfully requests that the rejections be reversed and the claims passed to allowance.

A. Response to Positions on Claim Language and Interpretation

1. *“Machine Direction” and “Cross-Machine Direction” Are Not Ambiguous and Must Be Considered for Patentability*

As explained in the Appeal Brief, “machine direction” is a term regularly used in the art and would readily be understood by the skilled artisan to refer to the transport direction of the web upon a paper-making machine. Similarly, “cross-machine direction” is the axis that is 90° from the machine direction. See Appeal Brief at 16-19. The Examiner’s Answer acknowledges this point, stating that “usually the terms ‘machine direction’ and ‘cross machine direction’ are used in the art by referring to the transport of a web through a processing machine.” Examiner’s Answer at 7.

However, the Examiner’s Answer continues by stating that “appellant defines these terms as inherent properties within a web.” *Id.* But Appellant has not offered such a definition and has explained repeatedly, and so reiterates here, that it does not assert that all fibrous webs have a machine direction and cross-machine direction, only that those webs formed on a paper-making machine will have machine and cross-machine directions. To be precise, any web formed on a paper-making machine has a machine direction oriented in the transport direction of the web as it is formed and travels along the machine. The cross-machine direction is at a right angle to the machine direction. Independent claims 80 and 84 explicitly recite “providing a single-ply

paper web having a machine direction and a cross-machine direction,” thus removing any ambiguity about the presence and orientation of those directions in the paper web.

Appellant maintains its position that the recitations “machine direction” and “cross-machine direction” are clearly defined and are not ambiguous or indefinite, such that they must be considered during a proper evaluation of patentability. Even if the Office believes that some amount of ambiguity exists, those recitations must still be considered in judging patentability and cannot be ignored. See MPEP § 2173.06 (“All words in a claim must be considered in judging the patentability of a claim against the prior art. *In re Wilson*, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). The fact that terms may be indefinite does not make the claim obvious over the prior art.”).

2. A 1:1 or “Square” Web Does Not Lack a Machine Direction and a Cross-Machine Direction

The Examiner’s Answer perpetuates a misunderstanding of the concepts of machine direction, cross-machine direction, and tensile strength. Examiner’s Answer at 7. As stated above, any web formed on a paper-making machine has a machine direction and a cross-machine direction. One of the properties that is commonly measured across the machine direction and cross-machine direction of a paper web is the tensile strength. Paper webs having one or more properties, like tensile strength, that are the same in both directions are called “square.” But almost all paper webs are “anisotropic” (i.e., not “square”) and exhibit different properties in each of those directions, due in part to the arrangement of cellulosic fibers during the paper-making process. A truly square web is rare, as implicitly recognized by the present specification when it speaks of a tensile strength ratio that “approaches 1:1” and a “web that is close

to 'square.'" Specification at ¶ [067]. In any event, just because the ratio of tensile strengths measured in a web may be 1:1 or about 1:1 does not mean that the web ceases to have a machine direction and a cross-machine direction, as believed by the Office. See Examiner's Answer at 7. As explained above, those directions are a function of the web's orientation of travel along the paper-making machine, are found in all webs made on a paper-making machine, and are entirely independent of any measured tensile strength values. Instead, equal or nearly equal tensile strengths in both the machine and cross-machine direction merely signifies that one property of the web happens to be the same regardless of the direction in which it is measured. It does not negate the presence of the two directions or render the directions meaningless. And a "square" tensile strength web is only one of many embodiments disclosed in the specification; that one embodiment does not control the scope of the pending claims.

Such a web may have other properties that do vary according to direction. Moreover, equal tensile strengths does not necessarily affect the ease or difficulty with which a web may be folded in a particular direction (particularly as it comes off of the paper-making machine) and the possible folding configurations that may be used without the need to turn the web. Quite simply, the fact that a paper web may exhibit "square" properties with regards to tensile strength does not negate the fact that the web, if formed on a paper making machine, would still have a machine direction and a cross-machine direction. Thus, Appellant maintains that it is improper for the Office to exclude the recited directions from its patentability analysis simply because, in one embodiment, a web may have equal or about equal tensile strengths in both directions.

3. The Terms “About” and “At Least About” Are Not Ambiguous

The Examiner’s Answer continues to assert that the terms “about” and “at least about” are indefinite. However, as used in the pending claims, and as supported by both the MPEP and relevant case law, those terms are neither ambiguous nor indefinite. As explained in the Appeal Brief, comparing the two measured dimension values, as well as determining whether the longitudinal value is at least about two times the transverse value, is easily within the abilities of the skilled artisan, such that the scope of the claims can be readily assessed. See Appeal Brief at 19-22.

Nonetheless, the Examiner’s Answer maintains that the language of the pending claims is indefinite because the specification uses the word “about” when disclosing exemplary values for the two recited lengths. The use of “about” when disclosing exemplary values in the specification does not have the effect of rendering indefinite otherwise unambiguous claim language. Instead, the claim language itself controls the inquiry. See MPEP § 2173.05; *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1557, 220 U.S.P.Q. 303, 316 (Fed. Cir. 1983) (“Distinguishing what infringes from what doesn’t is the role of the claims, not of the specification.”). The recited ratio in pending independent claims 80 and 84 (“at least about two times”) is itself wholly enabled and described, and separately supported from the individual dimensions questioned by the Office. See, e.g., specification at ¶ [034]; original claims 80 and 84.

As explained in the Appeal Brief, *Amgen, Inc. v. Chugai Pharm. Co.* clearly does not support the Office’s position regarding the indefiniteness of “about.” See Appeal Brief at 22-24. The facts of *Amgen* are clearly different and inapplicable to the facts of the current application. In fact, the *Amgen* court went so far as to explicitly state: “we

caution that our holding that the term 'about' renders indefinite claims 4 and 6 should not be understood as ruling out any and all uses of this term in patent claims. It may be acceptable in appropriate fact situations . . . even though it is not here." 927 F.2d, 1200, 1217-1218, 18 U.S.P.Q.2d 1060, 1030-1031 (Fed. Cir. 1991). Appellant has already offered two separate cases, both of which are also cited in MPEP § 2173.05(b), which possess fact patterns similar to the instant application and which clearly support Appellant's position that the terms "about" and "at least about," as used in the pending claims, are not ambiguous or indefinite. *Ex Parte Eastwood*, 163 U.S.P.Q. 316, 317 (B.P.A.I. 1968); *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1557, 220 U.S.P.Q. 303, 316 (Fed. Cir. 1983). The Office has never distinguished *Eastwood* or *Gore*, or even acknowledged Appellant's citation to them. The indefiniteness rejection of the claims due the recitation of "about" and "at least about" should be reversed.

B. Response to Rejections Based Upon §§ 102 and 103

1. *A Paper Towel Is Not the Necessarily the Same as a Napkin*

Lazar teaches a paper toweling product, not a single-ply napkin product as claimed. As previously explained, paper napkins generally present specific considerations that are different from other paper products, such as towels. In general, napkin products, and particularly single-use dispenser napkins, tend to be lighter weight, softer, less absorbent, and less strong than paper towel products. Thus, napkin products and paper towels are not necessarily interchangeable. While it may have been known to produce some forms of paper products in a single-ply format, the state of the art for napkins had not, prior to the filing of this application, involved the production of a single-ply product with only transverse folds in the machine direction. There

existed a need for a paper napkin product which used less material, and was less expensive and more economical to produce, and which provided similar benefits to the consumer as multi-ply napkin products or napkin products with both transverse and longitudinal folds. See specification at ¶ [012]. Quite simply, one of ordinary skill in the art, as well as any patron of a fast food establishment, readily understands the difference between the paper toweling product of Lazar and a “paper napkin” as is recited by the pending claims.

**2. *Lazar Does Not Teach A Method of Making a Napkin Product
“Wherein the Longitudinal Dimension Is At Least About Two
Times the Transverse Dimension”***

Lazar also fails to teach a method of making a paper web “wherein the longitudinal dimension is at least about two times the transverse dimension,” as recited in the pending claims. In support of the anticipation rejection over Lazar, the Office specifically cites to the drawings. Appellant has previously noted that nothing in Lazar’s drawings or specification disclose that recited feature of the pending claims. In response to Appellant’s arguments that unscaled drawings cannot properly be relied upon, the Office asserts that the drawings are not relied upon for their scale “but rather [for] what they convey to one of ordinary skill in the art along with the written description.” See Examiner’s Answer at 8. But both the drawings and the written description of Lazar are completely silent and fail to disclose a longitudinal dimension of at least about two times the transverse dimension. Therefore, Appellant maintains that Lazar does not teach that recitation in as complete detail as required by § 102.

3. *Neither Lazar nor Chan Teach a Method of Making a Napkin Product Wherein the Napkin Contains No Longitudinal Folds in the Cross-Machine Direction and at Least One Transverse Fold in the Machine Direction*

The Examiner's Answer states that "the argument that Lazar, Chan, or Ito necessarily teaches a transverse fold in the machine direction is not agreed with," as "one of ordinary skill in the art would not necessarily position the paper webs as argued as paper can be made and cut in a variety of ways," and that "each reference is silent to the machine and cross-machine directions of the tensile strength of the paper."

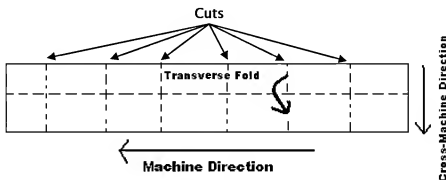
Examiner's Answer at 8. Those statements echo the Office's misunderstanding of the difference between orientation on a paper-making machine and tensile strength.

The Examiner's Answer further states that "as noted supra, given the appellant's definition a 1 to 1 ratio of these properties [tensile strength] provides for no difference in the labeling of directions/ dimensions." *Id.* As explained above, regardless of the ratio of the machine direction tensile strength to the cross-machine direction tensile strength, a web formed on a paper making machine necessarily possess both a machine direction and a cross-machine direction. Just because, in one embodiment, the tensile strengths in the two directions may be equal or nearly equal does not mean that the directions evaporate. Machine direction and cross-machine direction are both maintained even in a "square" web. Thus, the Office cannot avoid consideration of the recited directions through its improper conclusion.

a. Lazar

As would be readily understood by one of ordinary skill in the art, Lazar teaches only longitudinal folds in the machine direction and not at least one transverse fold in

the machine direction, as claimed. A web coming off of a paper making machine is generally continuous (like a roll of toilet paper). One common method of folding such webs in accordance with the prior art, and as taught by Lazar, is to use folding plows to fold a long stretch of web from that roll in the cross-machine direction. The long folded stretch may then be cut into several individual folded web products.



That Lazar disclosure of that process is clearly stated at 1:104 to 2:2 in its indication of simultaneous interleaving, through the simultaneous plow folding process described above. That folding does not result in the claimed at least one transverse fold which is in the machine direction, with no longitudinal folds that would be in the cross-machine direction. More simply, Lazar has at least one fold in the cross-machine direction and no folds in the machine direction, while the pending claims recite at least one fold in the machine direction and no folds in the cross-machine direction. Some confusion may be due to the fact that the folds of the pending claims and the folds of Lazar are both called "transverse folds" yet, as is clear from the a comparison of Lazar's teachings to the pending claims and the present specification, those folds are in different directions. See, e.g., specification at ¶ [080]. In the context of the pending claims, which define transverse folding in the machine direction and not in the cross-

machine direction, Lazar's folds would be considered longitudinal folds. Those differences underscore the need to consider the recitations regarding machine and cross-machine direction in the pending claims.

One of ordinary skill in the art, when considering the claims as a whole and with knowledge of the prior art plow folding process, would understand that Lazar's method creates longitudinal folds, while the method of the pending claims recite at least one transverse fold with no longitudinal folds. As such, Lazar cannot anticipate.

b. Chan

In the context of rejected independent claim 84, Chan fails to disclose a method of making a napkin product wherein "a transverse dimension is in the cross-machine direction" and wherein the napkin contains at least two transverse folds in the machine direction and no longitudinal folds in the cross-machine direction. As explained in detail in the Appeal Brief, the folding configuration of Chan would be extremely difficult, if not impossible, to form with only transverse folds in the machine direction. *See* Appeal Brief at 35-36.¹ Indeed, Appellant is not aware of any vacuum roll folders that contain the necessary number of vacuum rolls needed to form Chan's configuration without the use of at least one fold in the cross-machine direction. The skilled artisan would readily understand that Chan, in fact, teaches only folds in the cross-machine direction with no folds in the machine direction. *See id.* Chan teaches nothing to the contrary and

¹ Appellant notes two minor errors in the Appeal Brief's discussion of Chan, both on page 36. First, the sentence beginning on line seven should read: "However, Chan does not contain such a longitudinal fold or indeed any mixture of transverse folds and longitudinal folds—all of its folds are only transverse folds in the cross-machine direction."

Second, the sentence beginning on line ten should read: "In short, the complicated and unique folding structure of Chan cannot result in no longitudinal folds in the cross-machine direction and at least two transverse folds in the machine direction, as recited in independent claim 84."

certainly not with any disclosure sufficient to enable one of skill in the art to achieve the method of the pending claims. As such, it cannot anticipate the pending Group II claims directed to at least two transverse folds in the machine direction and no longitudinal folds in the cross-machine direction.

4. The Rejected Claims Are Also Not Obvious Over the Cited Art

a. Lazar in View of Appellant's Allegedly Admitted Prior Art

While Appellant continues to deny that the status of the allegedly admitted prior art ("APA"), the supposed APA—that the skilled artisan would have known that the folding method of Lazar could be applied to webs of various sizes and weights, including those recited in claims 82 and 87—still does not remedy any of the defects of Lazar discussed above. Lazar, in view of the supposed APA, still does not teach either (1) a method of making a single-ply napkin product, (2) a method of making a napkin product wherein the longitudinal dimension is at least about two times the transverse dimension, or (3) a method wherein "a transverse dimension is in the cross-machine direction" and wherein the napkin contains at least one transverse fold in the machine direction and no longitudinal folds in the cross-machine direction. See Appeal Brief at 39-42. The claims are not *prima facie* obvious over Lazar and the supposed APA.

b. Ito

Similarly, Ito fails to render the pending claims obvious at least because it does not teach or suggest a method of making a single-ply product, let alone a napkin product, nor does it teach or suggest a method of making a product wherein the longitudinal dimension is at least about two times the transverse dimension. See *generally* Appeal Brief at 42-45. Although the Office recognizes that Ito primarily

teaches the use of a four-ply configuration instead of the recited single-ply configuration, the Office notes that Ito also suggests alternative embodiments including “other materials such as nylon scrim reinforced tissue laminate or absorbent polyolefin.” See Examiner’s Answer at 10; Ito at 7:47-52. While it is not clear from Ito whether those alternative embodiments would also be four-ply in nature or in some other configuration, it is clear that neither nylon nor polyolefin materials comprise a “paper napkin,” as recited in the pending claims. Instead, those materials are primarily if not exclusively non-paper, synthetic polymers that are not relevant to the pending claims.

Instead of a single-ply paper napkin, Ito is directed to an industrial size shop wiper. See Ito at 1:6-16 and 2:62-66. Ito explains that its preferred “four-ply creped wadding web” has been specifically chosen “in order to provide high strength and good oil and water absorbency characteristics in the wiper.” *Id.* at 7:44-47. Such a purpose clearly weighs against any motivation for one of ordinary skill in the art to have modified its four-ply configuration to a single-ply configuration. The Office’s proposed an adjustment would drastically reduce the strength of that product and essentially render it useless for its intended function as an industrial shop wiper. See Appeal Brief at 43-44.

The Office states that “thickness of the ply is recognized as directly related to strength of a ply.” Examiner’s Answer at 10. To the extent that two plies have the same composition and formation properties, that statement may be generally true. Similarly, it is also true that the number of plies a product has is generally directly related to its strength. As noted above, Ito explicitly mentions “high strength” as an important factor of its industrial size shop wiper product. However, the only means by which Ito suggests that this “high strength” may be achieved is by the use of a relatively thick

four-ply paper product or, alternatively, completely different non-paper synthetic polymer materials (nylon or polyolefin). There is no teaching or suggestion in Ito that one extremely thick ply would accomplish the same or similar level of strength as the four-ply product. Thus, the Office's statement regarding thickness and strength is not helpful in proving any *prima facie* obviousness of the rejected claims.

While it may have been known to produce some forms of paper products in a single-ply format, the state of the art for napkins prior to the filing of this application had not previously been the production of a single-ply product with only transverse folds in the machine direction. One of ordinary skill in the art would simply not have been motivated to modify the teaching of Ito to arrive at a single-ply paper product, particularly given Ito's teaching of the need for "high strength" and suggested non-paper alternatives for accomplishing that strength—none of which include a product even comparable to the single-ply paper napkin of the pending claims.

IV. Conclusion

With the Examiner's Answer presenting essentially no new arguments in support of the Office's rejections, Appellant maintains its positions in support of patentability. The recited claim terms are sufficiently definite for purposes of 35 U.S.C. § 112, second paragraph, and the terms "machine direction" and "cross-machine direction" must be given patentable weight. In light of those considerations, the Office has not presented a proper case of anticipation of any of the Group I or II claims over either Lazar or Chan. The Office also has not presented a proper *prima facie* case of obviousness of any of Group I or II claims with regards to either Ito or Lazar in view of Appellant's supposed

APA. Therefore, Appellant respectfully requests that the rejections be reversed and the pending claims passed to allowance.

Please grant any extensions of time required to enter this Reply Brief and charge any additional fees required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: March 23, 2008

/Robert C. Stanley/

By: _____
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